

REMARKS

Careful consideration has been given by the applicants to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, and favorable reconsideration and allowance of the application, as amended, is earnestly solicited.

Applicants note the Examiner's indication that the claims, as submitted in response to the previous Office Action, overcome the rejection on the basis of Oda, et al., U.S. Patent No. 6,489,668 and Barber, et al., U.S. Patent No. 6,590,292, as indicated in the Office Action.

However, applicants note that the Examiner now cites Katchmar, U.S. Patent No. 6,392,892 in view of the admitted prior art, with respect to Claims 1, 3, 8-11, 13 and 18-20, as being unpatentable under 35 U.S.C. §103(s).

Furthermore, applicants note the rejection of Claims 2, 4-7, 12 and 14-17 under 35 U.S.C. §103(a), as being unpatentable over Katchmar in view of the prior art and further in view of Barber, et al., U.S. Patent No. 6,590,292, as previously cited and as detailed in the Office Action.

However, upon careful consideration of the art, applicants respectfully submit that the claims clearly and patentably distinguish thereover, irrespective as to whether the publications are considered singly or in combination.

In particular, applicants note that although Katchmar discloses a method and device for heat dissipation in an electronic system, whereby a central portion 42 of an electrically conductive silicone adhesive is arranged in a single spot on a center surface portion of the electrical component and an electrical non-conductive silicone adhesive 36 of extensively larger surface area encompasses silicon adhesive 42, the claims as presented herein clearly and patentably distinguish thereover.

-7-

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In particularly, noting Katchmar, the electrically conductive silicone adhesive 42 encompasses a large portion of the surface area, and, having reference to Figure 2b of the prior art clearly shows that the differences in area between the silicone adhesives 36 and 42 are not of a proportion analogous to that set forth and claimed by the present invention.

In essence, an important aspect of the invention resides in the fact that the electrically conductive silicone adhesive 18 is in the form of a small spot and a quantity which is sufficient to achieve at least a one millimeter diameter bonding area between the heat spreader and the surface of a semiconductor chip. An electrically non-conductive thermosetting silicone adhesive is then dispensed in a suitable pattern to cover most of the remaining chip backside surface area about sides of the adhesive 18.

The use of the centrally located spot, which is extremely small in size in comparison with the overall area and which contains the electrically conductive silicone adhesive, prevents any possible electrical short within the producing of signal-disruptive noises in signal circuits.

Consequently, by utilizing a small spot of approximately 1 millimeter in diameter, the difficulties in the technology are avoided.

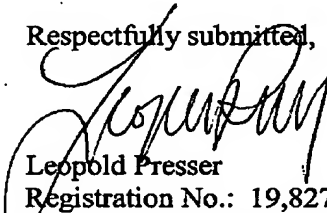
The foregoing cannot be attained by means of Katchmar, wherein the electrically conductive adhesive 42 is of a relatively large area and may have a tendency to spill outwardly and possibly cause electrical shorting.

With regard to the combination thereof with Barber, et al. and any art admitted by applicants, again there is no disclosure of the use of a small central spot of approximately only 1 millimeter in diameter in comparison with the large electrically non-conductive adhesive material.

Accordingly, in order to clearly and unambiguously distinguish over the art, irrespective as to whether the latter is considered singly or in combination, the claims have been amended to incorporate, in the independent claims, the particular aspect of the small size of the sample spot of the electrically conductive silicone adhesive, in comparison with the surrounding or encompassing electrically non-conductive silicone adhesive material, the advantages of which are clearly set forth in the present specification.

In view of the foregoing comments and amendments, which are deemed to be fully responsive to the Examiner's grounds of rejection, the early issuance of the Notice of Allowance by the Examiner is earnestly solicited. However, in the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Respectfully submitted,


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